

PANPHALEA HETEROPHYLLA (COMPOSITAE:
MUTISIOIDEAE: NASSAUVIEAE), A GENUS AND SPECIES
NEW FOR THE FLORA OF NORTH AMERICA

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ABSTRACT

Panphalea heterophylla (Compositae) is a new genus and species for the United States. This also is the first known occurrence of the genus from outside of its native range in southern South America.

RESUMEN

Panphalea heterophylla (Compositae) es un género y especie nueva para los Estados Unidos. Este es también el primer reporte del género fuera de su área de ocurrencia nativa en Sur América.

Determinations of Compositae in conjunction with the study of Nesom (2004) identify *Ahles & Haesloop* 22585 (NCU) as *Panphalea heterophylla* Less. (Compositae: Mutisioideae: Nassauvieae), a genus and species new for the flora of North America. This is the first known occurrence of *Panphalea* Lag. from outside of its native range in Argentina, Brazil, Paraguay, and Uruguay and increases to three the number of genera of Nassauvieae known in North America. In this paper I amplify comments on the taxonomic significance of the record, past the summary provided in Nesom (2004), with a description and typification of the species, U.S.A. voucher, and a key to the genera of Mutisioideae that occur in North America north of Mexico.

Nassauvieae Cass. were treated as Mutisieae subtribe Nassauviinae (Cass.) Benth. & Hook.f. by Bentham and Hooker (1873) and placed in Compositae subfamily Mutisioideae (Cass.) Lindl. [syn. Nassauvioideae (Cass.) Lindl.] by Pruski and Sancho (2004). Nassauvieae were resurrected from synonymy of Mutisieae and reinstated at the tribal level by Pruski (2004). Nassauvieae differ from Mutisieae Cass. by longer style branches with truncate tips commonly covered by a tuft of collecting hairs, by anthers with a well-defined appendage and shorter broader thecae, but they have bilabiate corollas and caudate anthers typical of most Mutisioideae [tribe Stifftieae D. Don is characterized by discoid capitula with short, abaxially rugulose style branches and mutisoid anthers (Pruski 2004)]. Nassauvieae are centered in South America, but two genera were previously known to occur in North America (Simpson & Anderson 1978): *Trixis* P. Browne is largely South American, but extends northward into the West Indies, Mesoamerica, Mexico, and the southwestern United States; *Acourtia* D. Don occurs from Mesoamerica northwards into the southwestern United States.

Panphalea heterophylla differs by epappose cypselae from the species of the five genera of Mutisioideae treated by Simpson and Anderson (1978) in North America north of Mexico [*Acourtia* D. Don (5 spp.), *Chaptalia* Vent. (4 spp.), *Gochnatia* H.B.K. (1 sp.), *Hecastocleis* A. Gray (1 sp.), and *Trixis* P. Browne (2 spp.)]. Additionally, the combination of the following features serves to further distinguish *Panphalea heterophylla* from these 13 species of Mutisioideae: annual herbaceous habit; glabrous herbage; leaves basal and cauline, lyrate to sharply lobed; corymbiform capitulescences; few-flowered, bilabiate capitula; thinly chartaceous, apiculate phyllaries; homogamous florets; and bilabiate, isomorphic corollas with an apically shortly bidentate inner lip.

KEY TO MUTISIOIDEAE IN NORTH AMERICA NORTH OF MEXICO

1. Style branches short, apically rounded, glabrous or sparsely papillose; cypselae pap-pose (Mutisieae).
 2. Plants rosulate herbs; capitula bilabiate-heteromorphic _____ **Chaptalia** Vent.
 2. Plants subshrubs to shrubs; capitula discoid.
 3. Leaves abaxially tomentose, entire; capitula many-flowered, not glomerate, not subtended by spiny subinvolucral bracts; pollen tricolporate _____ **Gochnatia hypoleuca** (DC.) A. Gray
 3. Leaves not abaxially tomentose, at least some leaves with spiny margins; ca-pitula uniflorous, glomerate, subtended by spiny subinvolucral bracts; pollen tricolporate _____ **Hecastocleis shockleyi** A. Gray
1. Style branches elongate, apically truncate, crowned by a tuft of collecting hairs; cypselae pappose or epappose (Nassauvieae).
 4. Glabrous annual herbs; inner corolla lip undivided proximally, bidentate apically; cypselae epappose _____ **Panphalea heterophylla** Less.
 4. Perennial pubescent herbs to shrubs; inner corolla lip bifid, divided to base, cypselae pappose.
 5. Rosulate perennial herbs, caudex commonly tomentose; corollas violet, pink-ish, or white _____ **Acourtia** D. Don
 5. Subshrubs to shrubs, corollas yellow _____ **Trixis** P. Browne

Panphalea heterophylla Less., *Linnaca* 5:8. 1830. TYPE: BRAZIL: In humidis Brasiliae meridionalis, 1823-1828 [sic], *Sello* 1328 (HOLOTYPE: B, destroyed, photographs. MO!, NY!, US!, all photographs from C.B.G.N. negative 16096).

Glabrous annual herbs; stems slender, few to several, branched at base, spread-ing to ascending, 5-17 cm long. **Leaves** basal and cauline, alternate, chartaceous; basal leaves petiolate, oblong to oblong-lyrate, petiole 7-12 mm long, blade or-bicular or more commonly lyrate with about 3 pairs of lobes, 4-15 mm long, 4-7 mm wide, margins entire; cauline leaves commonly sessile and clasping, ovate-lyrate, palmatifid, pedate, or lanceolate, 4-12 mm long, 4-6 mm wide. **Capitulescence** corymbiform, few-headed; peduncles 10-30 mm long. **Capitula** 8-12-flowered, bilabiate, homogamous; involucre 1-2-seriate, ca. 2.2 × 2 mm; phyllaries subequal, ovate-lanceolate, thinly chartaceous, apically truncate-apiculate, apiculum to ca. 0.5 mm long, margins broad, hyaline; receptacle

epaleate. **Florets** bisexual; corollas bilabiate, isomorphic, white, ca. 5 mm long, weakly puberulent with scattered uniseriate, 5–7-celled trichomes, apical cell larger but neither bulbous nor inflated, tube ca. 2 mm long, outer lip ovate, ca. 3×1.5 mm, minutely tridentate apically, adaxial epidermal cells longitudinally elongated (mutisoid epidermal pattern), outer wall acute-ridged in transverse section, inner lip ca. 1.2 mm long, coiled, undivided proximally, shortly bidentate apically; style branches ca. 0.7 mm long, apically truncate, papillate with many collecting hairs; anthers ca. 2 mm long, caudate, apical appendage well-defined, obtuse, ca. 0.5 mm long, tails broadly lanceolate, ca. 0.4 mm long, smooth, tips rounded, not tapered. **Cypselae** obconical, ca. 1.5 mm long, densely pubescent, apically truncate; pappus absent. **Pollen** spheroidal, tricolporate, tectum minutely granular (subsilate).

Specimen examined: UNITED STATES. **South Carolina. Berkeley Co.:** Jamestown on SC route 45, waste ground around the Santee Wool Combing Mill, 8 Apr 1957, Ahles & Haesloop 22585 (NCU).

Panphalea contains nine species (Cabrera 1953; Cabrera & Klein 1973) found in northeastern Argentina, adjacent Brazil, Paraguay, and Uruguay. Three species are annual herbs, and among these only the smallest, *Panphalea heterophylla*, is glabrous. Cypselae of this species were presumably imported into the United States in fleece brought from South America for processing. Species of tribe Nassauvieae are not commonly weedy, and it is unlikely that this subtropical species will become a pest, if it has persisted at all in South Carolina.

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